

WHAT IS CLAIMED IS:

1. An apparatus for forwarding a communication request, which is directed to a home address of a mobile node and is transmitted from another node via a network, to a network segment to which the mobile node is currently connected, based on a relationship between the home address and a care-of-address used in the network segment, comprising:

a unit configured to store event information indicative of occurrence of the communication request from said another node to the mobile node, when the communication request is received in a state in which the mobile node is not connected to the network; and

an informing unit configured to execute, based on the stored event information, a process for informing said another node via the network that the mobile node has become communicable, in response to a registration request for registration of the care-of-address, which is transmitted via the network from the mobile node connected to the network segment.

2. The apparatus according to claim 1, further comprising a unit that stores the care-of-address of the mobile node on the basis of the registration request for the care-of-address.

3. The apparatus according to claim 1, wherein the event information includes an address of said another node that has transmitted the communication

request.

4. The apparatus according to claim 1, further comprising means for executing a validity check process for determining whether the registration request is
5 valid, in response to the registration request for the care-of-address,

wherein the informing unit includes a unit that executes said process for informing, after the validity check process determines that the registration request
10 is valid.

5. The apparatus according to claim 1, further comprising means for executing a validity check process for determining whether the registration request is valid, in response to the registration request for the
15 care-of-address,

wherein the informing unit includes a unit that executes said process for informing, before the validity check process is executed.

6. The apparatus according to claim 1, further
20 comprising a unit that informs the mobile node via the network that the communication request directed to the mobile node has been transmitted from said another node, based on the stored event information, in response to the registration request for the care-of-
25 address.

7. The apparatus according to claim 1, further comprising a unit that informs, when the communication

request, which is transmitted from said another node and directed to the home address, is received in a state in which the mobile node is not connected to the network, said another node via the network that the
5 mobile node is not connected to the network and that when the mobile node becomes communicable, this fact is to be noticed.

8. A method of forwarding, based on a relationship between a home address allocated to a
10 mobile node and a care-of-address used in a network segment at a destination of movement, to which the mobile node is currently connected, a communication request, which is transmitted from another node via a network and directed to the home address, to the
15 network segment at the destination of movement, comprising:

storing, when the communication request, which is transmitted from said another node and directed to the home address, is received in a state in which the
20 mobile node is not connected to the network, event information indicative of occurrence of the communication request from said another node to the mobile node; and

executing, based on the stored event information,
25 a process for informing said another node via the network that the mobile node has become communicable, in response to a registration request for registration

of the care-of-address, which is transmitted via the network from the mobile node connected to the network segment at the destination of movement.

5 9. The method according to claim 8, further comprising storing the care-of-address of the mobile node on the basis of the registration request.

10 10. The method according to claim 8, wherein the event information includes an address of said another node that has transmitted the communication request.

10 11. The method according to claim 8, further comprising executing a validity check process for determining whether the registration request is valid, in response to the registration request for the care-of-address,

15 wherein said executing of the process for informing includes executing said process for informing, after the validity check process determines that the registration request is valid.

20 12. The method according to claim 8, further comprising executing a validity check process for determining whether the registration request is valid, in response to the registration request for the care-of-address,

25 wherein said executing of the process for informing includes executing said process for informing, before the validity check process is executed.

13. The method according to claim 8, further comprising informing the mobile node via the network that the communication request directed to the mobile node has been transmitted from said another node, based
5 on the stored event information, in response to the registration request for the care-of-address.

14. The method according to claim 8, further comprising informing, when the communication request, which is transmitted from said another node and
10 directed to the home address, is received in a state in which the mobile node is not connected to the network, said another node via the network that the mobile node is not connected to the network and that when the mobile node becomes communicable, this fact is to be
15 noticed.